NOVEMBER/DECEMBER 2024

CEEL63A/BEEL63A — MICROCONTROLLER 8051 AND ITS APPLICATIONS

Time : Three hours Maximum : 75 marks

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SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. List down the difference between microprocessor and micro-controller.

2. Specify the functions of program counter.

3. Write down the modes of timer in 8051.

4. Define serial port interrupt.

5. Mention the various types of addressing modes.

6. What do you mean by rotate operation?

7. State PUSH instruction in 8051.

8. What is called subroutine?

9. What is D/A conversion?

10. Outline keyboard interfacing.

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SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Write a short note on A and B CPU register.

Or

(b) Illustrate the functions of flags and PSW.

12. (a) Evaluate the timer modes of operation.

Or

(b) Outline the significance of interrupt control and interrupt priority.

13. (a) Compare increment and decrement instructions.

Or

(b) Explain the bit level logic operations.

14. (a) Describe the code memory read only data move.

Or

(b) Explain in detail call instructions.

15. (a) Summarize the working of digital to analog converter.

Or

(b) Discuss in detail the stepper motor interfacing.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. With a suitable sketch explain the architecture of 8051 micro controller.

17. Discuss in detail the various types of interrupts.

18. Develop a program to add and subtract two 8-bit numbers using 8051 instructions.

19. Elaborate the JUMP instruction in 8051.

20. Explain the working of seven segment and LCD display.

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